

Appl. No. 10/644,475
Amdt. Dated October 7, 2005
Reply to Office Action of July 15, 2005

REMARKS

Claims 1, 2, and 5-19 are pending in the application.

By the foregoing amendments, Applicant has amended independent claims 8 and 14 for purposes of clarity. Applicant believes the claims are all in a condition for allowance, and respectfully requests that the Examiner pass the application to issuance.

Claim Rejections Under 35 U.S.C. §103

Claims 1, 2, and 5-7 stand rejected under 35 U.S.C. §103 as being unpatentable over Breese, U.S. Patent No. 5,983,497 in view of Jaekel, U.S. Patent No. 6,543,266 in further view of Kragtwijk, EP 763 448 A1. According to the Office Action, it would have been obvious to modify Breese to include the use of a transition area adapted to collapse under load as taught by Jaekel and, further, it would have been obvious to modify Breese to include the use of a transition area wherein the body lies over a portion of the transition area in view of Kragtwijk. Applicant traverses the rejections under 35 U.S.C. §103 and submits that a *prima facie* case of obviousness has not been established. Further, to the extent the combination of references can be viewed to disclose each claim element, the combination is improper in view of the lack of motivation or suggestion to combine the references.

Specifically, Applicant submits that independent claims 1, 8 and 14 are non-obvious in view of the combination of references because the combination of references fail to disclose or suggest at least the following features: an intermediate portion defining two transition areas with respect to the body, wherein at least part of the body lies over the intermediate portion (claims 1 and 14), or a spin-formed transition area wherein at least part of the body lies over the intermediate portion (claim 8), such that in response to a sufficient axial load, the transition area will fracture and allow the body to telescope over the intermediate portion. Neither Jaekel nor Kragtwijk disclose the claimed fracture feature, and one of skill in the art would not modify Breese to include a modified combination of Jaekel and Kragtwijk.

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The combination of references supporting the obviousness rejections is improper for several reasons. First, the Breese reference is completely unrelated to the problem addressed by the present invention. The Breese reference is only concerned with forming an aluminum alloy driveshaft tube with a reduced diameter portion to avoid clearance issues with respect to other components of the vehicle near the driveshaft. Breese does not mention or suggest any crash improvement features and, is not concerned with whether the driveshaft can collapse in a controlled fashion under axial loads. Applicant thus submits that one of skill in the art would not be motivated to modify the Breese reference as the Office Action proposes because the Breese reference is directed toward a completely different problem.

Thus, the Office Action errs in defining the problem facing the Applicant of the present invention in terms of its solution. That is, the Office Action's formulation of the problem confronting the Applicant (the need to provide a collapsible driveshaft) presumes the solution to the problem (modify Breese to include a modified feature of Jaekel and Kragtwijk, combined). "Defining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness." *Monarch Knitting Machinery v. Sulzer Morat GmbH*, 139 F.3d 877, 881 (Fed. Cir. 1998). Also, to say that the missing claimed feature of Breese – providing a transition area to collapse under load and having a part of the cylindrical body lying over the intermediate portion – comes from the nature of the problem to be solved, evidences improper hindsight reconstruction because the Office Action fails to show that this problem is identified in the Breese reference. *In Re Zurko*, 111 F.3d 887, 890 (Fed. Cir. 1997). The fact that one of skill in the art has the capabilities to arrive at the invention is not the test for whether one of skill in the art would have arrived at the invention based on the teachings of the prior art. *Ex Parte Levengood*, 28 USPQ2d 1300-1301, 1302 (BPAI 1993). ("That which is within the capabilities of one skilled in the art is not synonymous with obviousness.") The focus must remain on what the prior art suggested to one of skill in the art at the time that the invention was made.

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Critically, none of the prior art references relied upon in the Office Action suggest Applicant's claimed intermediate portion having at least two transition areas and a portion of the tubular body lying over the intermediate portion. Thus, the Office Action relies on impermissible hindsight reconstruction, which is evident in view of the Office Action's reliance on "general knowledge" of one skilled in the art. As stated by the Federal Circuit:

Because the [Examiner] did not explain the specific understanding or principle within the knowledge of a skilled artisan that would motivate one with no knowledge of [Applicant's] invention to make the combination, this court infers that the examiner selected these references with the assistance of hindsight. This Court forbids the use of hindsight in the selection of references that comprise the case of obviousness.

In re Rouffet, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Second, the Breese reference would not be modified in view of Kragtwijk and Jaekel. As noted in the previous response, Kragtwijk is directed toward an energy absorbing tubular element which is deformable by inversion, and a method for manufacturing the tubular element. In all instances in the Kragtwijk disclosure, the energy absorbing unit comprising the tubular element deformable by inversion is formed by as a unitary member comprising an end wall extending radially inwardly. The end wall is shown in Figures 1, 2, 3, and 7 of Kragtwijk as reference numerals 8, 26, 34, and 76, respectively. This end wall in the various embodiments acts as an attachment mechanism or a strike plate for transmitting axial force to the energy absorbing unit. In all instances, however, the device of Kragtwijk has a cup-shaped form because of the end wall. This configuration for the various embodiments of Kragtwijk is critical, and results from the energy absorbing unit being formed by cold forging or cold extrusion. Indeed, forging or extruding the energy absorbing unit as a unitary cup-shaped member is the solution of Kragtwijk in response to problems identified with prior art multi-piece energy absorbing units. Indeed, consistent with the disclosure of Kragtwijk, all claims require a unitary member having a radially inwardly extending wall integral therewith. Because the energy absorbing unit of Kragtwijk is forged or extruded, however, it is

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more properly described as a single cylindrical part having two different diameter portions 2, 4 joined through an annular portion 6 having an arched radial cross section providing an inversion radius. (EP '448, Col. 2, lines 40-46).

Because Kragtwijk only discloses forging or extrusion, and Kragtwijk makes it clear that such processes are critical to provide the advantages sought by the energy absorbing unit of Kragtwijk, it teaches away from Applicant's claimed cylindrical body lying over a portion of the intermediate region by way of a spin-forming process. In other words, the claimed intermediate portion and transition areas of the present application cannot be formed by forging or extrusion which are the emphasized processes in Kragtwijk. Further, Kragtwijk does not disclose or suggest Applicant's claimed intermediate portion because the arrangement of Kragtwijk fails to disclose at least two transition areas. Instead, Kragtwijk only discloses a single cylindrical part having two different diameter portions joined by an inversion radius. This device is only operable in connection with the "strike plate" and, thus, does not suggest its use anywhere other than at an end of the tube element. It would not be used in an intermediate tube location.

Finally, the Jaekel reference likewise fails to disclose Applicant's claimed two transition areas between the intermediate portion and the hollow cylindrical body. Further, since hydro-forming is the only process disclosed in Jaekel, the body of the shaft could not be formed to overlay any portion of the single transition area. Thus, Jaekel also teaches away from the claimed invention.

Thus, although the Office Action purports to recognize the need to identify a suggestion or motivation to modify the prior art, it fails to do so and, indeed, succumbs to the allure of using the claimed invention as a template for modifying the prior art. *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577 (Fed. Cir. 1984). ("It is impermissible to use the patent itself as the source of suggestion.") In other words, no valid reasons have been shown as to why one of skill in the art would modify the Breese reference to arrive at the claimed invention, particularly since Kragtwijk is directed only toward forging or extruding to result in a unitary cup-shaped energy absorbing unit, and Jaekel only discloses a collapsible shaft incapable of being formed to have an overlay

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portion. Further, neither Kragtwijk nor Jaekel disclose an intermediate portion with at least two transition areas.

Finally, none of the references disclose spin-forming a reduced profile intermediate portion to create a transition area wherein at least part of the cylindrical body lies over the intermediate portion. This can only be accomplished by axial loading of the shaft as it is spin-formed. None of the references suggest this process. Accordingly, the Office Action's reliance upon "general knowledge" in the prior art which would lead one of skill in the art to modify the Breese reference as suggested is unsupportable because no specific reasoning has been provided to substantiate this assertion as is required. *In Re Chu*, 36 USPQ2d 1089, 1094 (Fed. Cir. 1995). ("Reversing an obviousness rejection because the Patent Office provided no specific reasoning to support the assertion of design choice.")

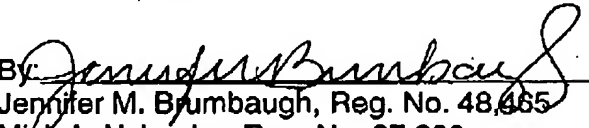
Conclusion

Having overcome all of the rejections set forth in the Office Action, the Applicant submits that the application is in a condition for allowance. A Notice of Allowance indicating the allowability of claims 1, 2, and 5-19 is therefore earnestly solicited. The Examiner is invited to telephone the Applicant's undersigned attorney if any unresolved matters remain. It is believe that no fee is due with the present Amendment, however, if a fee is due please charge deposit account 07-1360 under matter number G00348/US from which the undersigned is authorized to draw.

Respectfully Submitted,

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